

BMI IN THE OLD ORDER AMISH

Dear Editor-in-Chief:

Bassett et al. (1) studied an Old Order Amish community in Ontario and found far lower prevalences of overweight and obesity than those in the general Canadian and U.S. populations. Having studied another group of Old Order Amish living in Lancaster County, Pennsylvania, we would like to supplement with some of our own, contrasting observations.

While the cohort studied by Bassett et al. was relatively young (46% was less than 30 yr old), our cohort ($N = 953$) was aged 45–70 yr. Somewhat surprisingly, given the physically active Amish lifestyle, mean BMI was slightly *higher* in the Lancaster Amish than in the contemporary National Health and Nutrition Examination Study (NHANES) participants of European extraction and comparable age (BMI $27.9 \pm 4.6 \text{ kg}\cdot\text{m}^{-2}$ vs $27.0 \pm 5.1 \text{ kg}\cdot\text{m}^{-2}$) (4).

Oral glucose tolerance tests revealed that the proportion of Amish subjects who had dysregulated glucose homeostasis (impaired glucose tolerance or diabetes) was about the same as in the mainstream population. However, the prevalence of frank diabetes was surprisingly only about half of that in the mainstream population. This observation was consistent across all age strata studied (3). While genetic founder effects cannot be excluded, our findings strongly suggest that independent of BMI, the Amish environment may provide protection against diabetes. Possible explanations are high levels of physical activity and a relatively delayed accrual of body fat among the Amish (our own casual observations, including an apparent absence of obe-

sity in children, are consistent with Bassett's reported low prevalence of obesity in younger Amish).

Thus, the Lancaster Amish may illustrate the "Fat and Fit" paradigm described by Blair (2). However, as nonfarming occupations are becoming increasingly common among the Lancaster Amish, levels of physical activity are likely to vary. A study is now underway to determine the metabolic and cardiovascular correlates of physical activity levels among the Lancaster Amish.

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